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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,122	02/07/2007	John Mak	100325.0240US	5036

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FISH & ASSOCIATES, PC
ROBERT D. FISH
2603 Main Street
Suite 1000
Irvine, CA 92614-6232

EXAMINER	
ZEC, FILIP	

ART UNIT	PAPER NUMBER
3785	

NOTIFICATION DATE	DELIVERY MODE
02/10/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

rfish@fishiplaw.com
patents@fishiplaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/578,122	MAK ET AL.	
	Examiner	Art Unit	
	Filip Zec	3785	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment/Specification

1. The amended title of the invention as filed on 12/01/2010 is descriptive and acceptable. Entry of said amendment is hereby acknowledged.

Response to Arguments

2. Applicant's arguments filed on 12/01/2010 have been fully considered but they are not persuasive.

In reference to the general remarks by the applicant regarding the vaporized LNG stream of Wilkinson, page 6, the claim limitation clearly states "a liquefied natural gas storage vessel configured to receive liquefied natural gas and to allow withdrawal of a liquefied natural gas liquid and a liquefied natural gas vapor". Thus, the LNG tank (10, FIG. 10) of Wilkinson is indeed configured to allow withdrawal of a fluid stream which is a liquefied natural gas liquid (41a, FIG. 10) which, after exiting the heat exchanger (14, FIG. 10) is heated and vaporized, ergo becoming a liquefied natural gas vapor (col 12, lines 43-47), before entering the fractionator (16, FIG. 10). Further, it is unclear why the applicant is arguing the location of the vaporizers in Wilkinson and the present application, since claim 1 does not claim a vaporizer. Finally, the applicant is arguing that, as claimed, the fractionator is configured to receive a fractionator feed which is a combination of C_3 and heavier components and the liquefied natural gas vapor, unlike Wilkinson, which allegedly receives vaporized LNG. Wilkinson's fractionator (16, FIG. 10) has, however, as output (46 and 47, FIG. 10) a methane-rich residue gas (col 3, lines 34-35) and a liquid substantially devoid of methane and comprised of heavier hydrocarbons (col 3, lines 20-22), respectively. Since the only feed (42a and 43c, FIG. 10) to the fractionator comes from the

LNG tank (via 41b, FIG. 10), said feed must comprise the resultant components, natural gas vapor and liquefied heavy hydrocarbons (46 and 47, FIG. 10, respectively).

In reference to the applicant's arguments regarding the rejections of claims 1, 3-5, 8-9, 11-13 and 18-19, page 7, first paragraph, in light of the response in the previous paragraph, said arguments are non persuasive. Additionally, claim language does not contain the phrase "directly", thus the feed fluid can be processed and split between the tank (10, FIG. 10) and the fractionator (16, FIG. 10).

In reference to the applicant's arguments regarding the rejections of claims 2, 6-7, 10, 14-17 and 20, pages 7-8, second paragraph, in light of the response in the previous paragraph, said arguments are non persuasive.

Moreover, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the vaporizer", "the vapor and the liquid being directly obtained from the liquefied natural gas storage vessel") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Objections

3. Claims 1-10 are objected to because of the following informalities: claim 1, line 12 cites the limitation "C_3 and heavier and", wherein it should read - - C_3 and heavier components and - -. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 3-5, 8-9, 11-13 and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 7,155,931 to Wilkinson et al. (Wilkinson).

In reference to claim 1, Wilkinson teaches a plant (FIG. 10) comprising a liquefied natural gas storage vessel (10, FIG. 10) configured to receive liquefied natural gas and to allow withdrawal of a liquefied natural gas liquid (41a, FIG. 10) and a liquefied natural gas vapor (43b, FIG. 10); a fractionator (16, FIG. 10) that is fluidly coupled to the storage vessel (10, FIG. 10) and configured to receive a fractionator feed (43c, FIG. 10), wherein the fractionator is configured to allow production of (a) a stream of C_2 and lighter components (46, FIG. 10) and (b) a stream of C_3 and heavier components (47, FIG. 10); an overhead condenser (17, FIG. 10 and 19) coupled to the fractionator and configured to allow refrigeration content of the liquefied

natural gas liquid to condense the C_2 and lighter components; and wherein the fractionator feed (43c, FIG. 10) is a combination of the C_3 and heavier components and the liquefied natural gas vapor in which the C_3 and heavier components absorb the liquefied natural gas vapor (in heat exchanger 13, FIG. 10).

In reference to claim 3, Wilkinson teaches the plant as explained in the rejection of claim 1, and Wilkinson also teaches a heat exchanger (inside of absorbing section 16a, FIG. 10) configured to cool the fractionator feed using the liquefied natural gas liquid as a refrigerant (from 49a, FIG. 10).

In reference to claim 4, Wilkinson teaches the plant as explained in the rejection of claim 1, and Wilkinson also teaches a second heat exchanger (13, FIG. 10) configured to heat the fractionator feed (43, FIG. 10) using the stream of C_3 and heavier components (16, FIG. 10) from the fractionator as a heat source (col 12, lines 47-49).

In reference to claim 5, Wilkinson teaches the plant as explained in the rejection of claim 1, and Wilkinson also teaches that the fractionator is configured to provide the condensed C_2 and lighter components to the liquefied natural gas liquid (col 12, lines 34-37).

In reference to claim 8, Wilkinson teaches the plant as explained in the rejection of claim 1, and Wilkinson also teaches that the fractionator is configured to receive a portion of the liquefied natural gas liquid (42a, FIG. 10) as fractionator feed after the liquefied natural gas liquid provided refrigeration for condensation of the C_2 and lighter components (in heat exchanger 17, FIG. 10).

In reference to claim 9, Wilkinson teaches the plant as explained in the rejection of claim 8, and Wilkinson also teaches that the fractionator (16, FIG. 11) is further configured to provide

a liquefied petroleum gas (47, FIG. 11) as a bottom product (col 1, lines 8-10; col 15, lines 4-9). Even though FIG. 11 represents a different embodiment then the embodiment used in FIG. 10, the separator, which is in essence the fractionator, as claimed in the present invention, does not teach away from the second embodiment and can be used in combination with said second embodiment to disclose the entire claim 9.

In reference to claims 11, 12, 13, 18 and 19, they claim the method of providing and configuring the apparatus of claims 1, 3, 4, 8 and 9, respectively, thus, they are rejected based on the rejection of claims 1, 3, 4, 8 and 9 above and the associated method steps follow directly from the use of the apparatus.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkinson in view of Applicant's Admitted Prior Art (AAPA).

In reference to claim 2, Wilkinson discloses the plant as described in the rejection of claim 1, but does not teach that a portion of the liquefied natural gas vapor from the storage vessel is routed to a second liquefied natural gas storage vessel. AAPA shows a line (2, FIG. 1) conveying the vapor from the storage tank (52, FIG. 1) and splitting into two streams (2 and 3, FIG. 1) wherein one stream (3, FIG. 1) is conveyed to another storage tank (50, FIG. 1; page 6,

line 5 of the specification) in order to replace the displaced volume from ship unloading (page 6, lines 5-6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wilkinson, to include a line tapping the vapor line from the storage tank and conveying said vapor to another storage tank, as taught by AAPA, in order to replace the displaced volume from ship unloading.

In reference to claims 14 and 15, they claim the method of providing and configuring the apparatus of claim 2, thus, they are rejected based on the rejection of claim 2 above and the associated method steps follow directly from the use of the apparatus.

8. Claims 6, 7, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkinson in view of 6,089,022 to Zednik et al. (Zednik).

In reference to claim 6, Wilkinson discloses the plant as described in the rejection of claim 1, but does not teach a second liquefied natural gas storage vessel that provides the liquefied natural gas and configured to provide a second liquefied natural gas vapor to the second liquefied natural gas storage vessel. Zednik shows a system (FIG. Z below, as annotated by the Examiner) wherein a portion of the liquid natural gas vapor (from the supply line 13, FIG. Z) is returned (via line X, FIG. Z) to the storage tank (16, FIG. Z) located off shore (10, FIG. Z) in order to replace the displaced volume from ship unloading.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wilkinson, to include a line tapping the vapor line from the storage tank and returning said vapor to said storage tank, as taught by Zednik, in order to replace the displaced volume from ship unloading.

In reference to claim 7, Wilkinson discloses the plant as described in the rejection of claim 1, but does not teach that the second liquefied natural gas storage vessel is located on a ship. Zednik shows a system (FIG. Z) wherein a portion of the liquid natural gas vapor (from the supply line 13, FIG. Z) is returned (via line X, FIG. Z) to the storage tank (16, FIG. Z) located on ship (10, FIG. Z; col 3, lines 65-66) in order to replace the displaced volume from ship unloading.

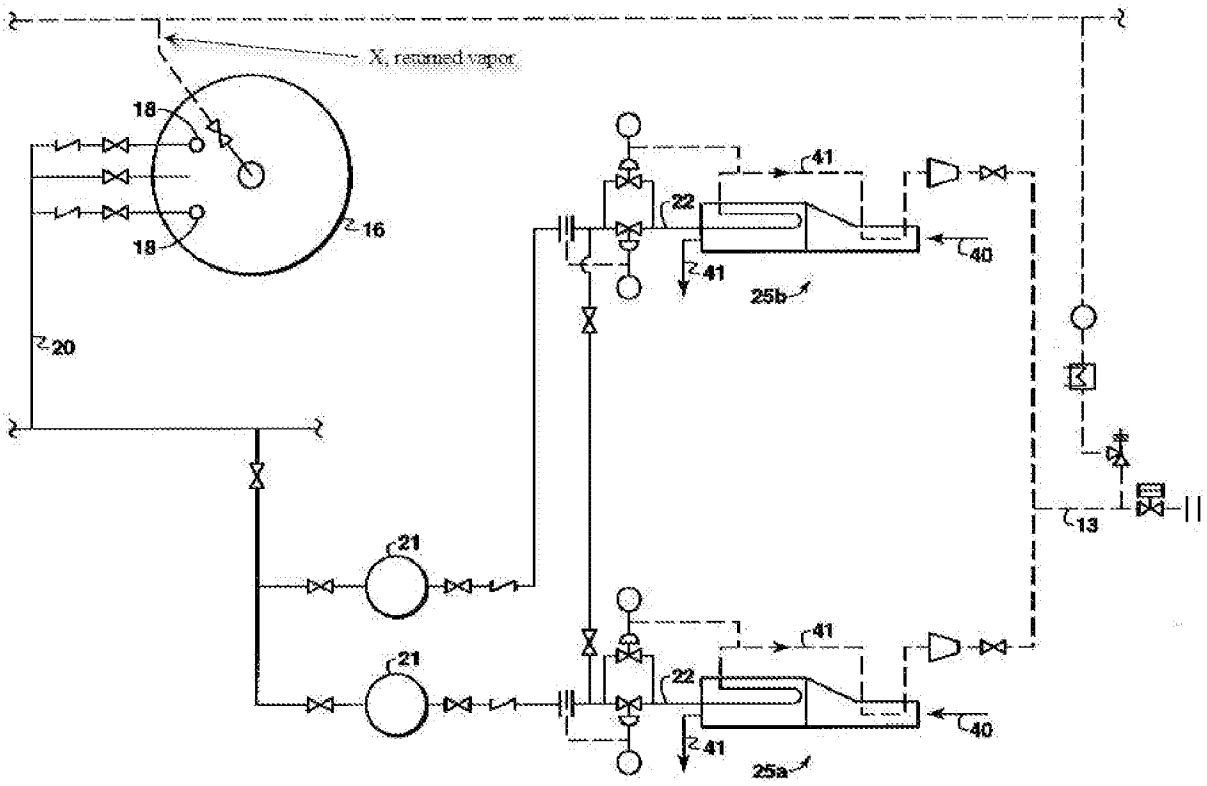

FIG. Z, as annotated by Examiner: return LNG vapor line to storage vessel on a ship

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wilkinson, to include a line tapping the vapor

line from the storage tank and returning said vapor to said storage tank, as taught by Zednik, in order to replace the displaced volume from ship unloading.

In reference to claims 16 and 17, they claim the method of providing and configuring the apparatus of claims 6 and 7, thus, they are rejected based on the rejection of claims 6 and 7 above and the associated method steps follow directly from the use of the apparatus.

9. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkinson.

In reference to claim 10, Wilkinson discloses the plant as described in the rejection of claim 9, but does not teach that the fractionator is configured to receive another portion of the liquefied natural gas liquid as condensation refrigerant after the liquefied natural gas liquid has provided refrigeration for condensation of the C_2 and lighter components. Wilkinson shows the fractionator (16, FIG. 19) receiving the portion of the liquefied natural gas liquid (41a, FIG. 19) as condensation refrigerant (in heat exchanger 17, FIG. 19) in order to condense the lighter overhead vapor (col 12, lines 34-37). Although Wilkinson did not disclose a plurality of condensing lines passing throughout the separator to cool off the vapor, the mere duplication of parts has no patentable significance unless a new and unexpected result is produced In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). In this case, another line conveying liquefied natural gas liquid would simply increase the capacity of the system, which one of ordinary skill in the art would find obvious.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wilkinson, to include an additional line

conveying liquefied natural gas liquid through the condensing part of the separator, as taught by Wilkinson, in order to increase the capacity of the system.

In reference to claim 20, it claims the method of providing and configuring the apparatus of claim 10, thus, it is rejected based on the rejection of claim 10 above and the associated method steps follow directly from the use of the apparatus.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is 571-270-5846. The examiner can normally be reached on Monday-Friday, from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JJ Swan can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ljiljana (Lil) V. Ciric/
for Judy Swann, SPE of Art Unit 3785

/F. Z./
Examiner, Art Unit 3785

2/04/2011